

REMARKS

Claims 1-6 are pending in this application. By this Amendment, claim 1 is amended to recite additional features. Support for the amendment may be found in, for example, at least the specification in paragraphs [0013], [0109], [0110], [0128], and [0171] of the corresponding U.S. Patent Publication No. 2004/0224643. Support for the amendment may also be found in at least Figures 9-11, 32, 33, 35, 39, and 40. The amendment introduces no new matter.

Applicant appreciates the courtesies shown to Applicant's representative by Examiner Tran in the May 29 personal interview (hereinafter "Interview"). Applicant's separate record of the substance of the Interview is incorporated into the following remarks. Reconsideration of the application is respectfully requested.

I. Claims Define Patentable Subject Matter

The Office Action rejects claims 1-4 under 35 U.S.C. § 103(a) as being unpatentable over Atarius et al. (U.S. Patent No. 6,920,324; hereinafter Atarius) in view of Yamakawa et al. (U.S. Patent No. 6,985,712; hereinafter Yamakawa). Applicant respectfully traverses the rejection of claims 1-4.

A. Claims 1-6 are Patentable Over Cited Prior Art

With respect to claims 1-6, Atarius and Yamakawa, taken individually or in combination, fail to disclose or suggest a front end module for processing transmission signals and reception signals in first and second frequency bands, wherein the front end module includes at least a second separating means for separating the transmission signals and the reception signals in the first frequency band from each other, wherein the second separating means is connected to a first separating means connected to an antenna, and the second separating means includes a first pair of two acoustic wave elements that each functions as a filter, wherein each of the acoustic wave elements in the first pair of two

acoustic wave elements is one of a surface acoustic wave element and a bulk acoustic wave element, as recited in independent claim 1.

Specifically, Atarius teaches a transceiver circuit 232 that performs a soft hand-over of a mobile terminal 22 that communicate to base transceivers 24a and 24b using different communication channels (Atarius, Abstract; Fig. 1). Transceiver circuit 232 includes a diplexer 54 that routes incoming signals to one of duplexer circuits 56 and 58 depending whether the signals is in the 800 MHz or 1900 MHz band (Atarius, Fig. 5). However, as the Office Action correctly recognizes and as Examiner Tran acknowledges during the Interview, Atarius fails to disclose "that the second separating means includes two acoustic wave elements each of which functions as a filter, the third separating means includes two acoustic wave elements each of which functions as a filter, and a single multi-layer substrate for integrating the first to the third separating means, wherein the first separating means is made up of a conductor layer located inside or on a surface of the multi-layer substrate" (Office Action, pg. 4, ll. 10-15).

Instead, the Office Action alleges that Yamakawa cures the deficiencies of Atarius by teaching a front end module that "comprises diplexer 303 and duplexer 308... wherein the duplexer 308 includes two acoustic wave elements 411, 414 each of which functions as a filter..." (Office Action, pg. 3, ll. 15-22). Applicant respectfully disagrees.

Yamakawa discloses an RF device that contains surface acoustic wave (SAW) filters 102a-b respectively connected to receiving terminals Rx1 and Rx2 (Yamakawa, col. 6, ll. 66-67; Figs. 6 and 7). Yamakawa also discloses a duplexer 308 having quarter-wavelength tip-short-circuited resonators 411a-b and 414 a-b respectively connected to one of transmitting terminal Tx3 and receiving terminal Rx3 (Yamakawa, col. 7, ll. 19-46; Figs. 6 and 7).

However, the acoustic wave elements utilize acoustic waves, as described in the present application's specification in lines 4 to 7 on page 5. For example, acoustic wave elements may be classified as surface acoustic wave elements that utilizes surface acoustic waves, as bulk acoustic wave elements that utilizes bulk acoustic waves, or the like.

In contrast, Yamakawa's disclosed quarter-wavelength tip-short-circuited resonators 411a-b and 414 a-b utilize a distributed constant line, not acoustic waves. Therefore, as Examiner Tran acknowledges during the Interview, tip-short-circuited resonators 411a-b and 414 a-b in Yamakawa are not surface acoustic wave elements. Thus, Yamakawa fails to disclose or render obvious a front end module for processing transmission signals and reception signals in first and second frequency bands, where the front end module includes at least a second separating means for separating the transmission signals and the reception signals in the first frequency band from each other, where the second separating means is connected to a first separating means connected to an antenna and includes a first pair of two acoustic wave elements that each functions as a filter, wherein each of the acoustic wave elements in the first pair of two acoustic wave elements is one of a surface acoustic wave element and a bulk acoustic wave element, as recited in independent claim 1. Accordingly, Yamakawa does not cure the deficiencies of Atarius, and a combination of Atarius and Yamakawa would not have arrived at the subject matter as recited in independent claim 1.

In accordance with the above remarks, independent claim 1 defines patentable subject matter. Claims 2-6 depend from claim 1, and therefore are also patentable for the same reasons, as well as for the additional features they recite. Accordingly, Applicant respectfully requests the withdrawal of the § 103(a) rejection of claims 1-4, and submits that claims 5 and 6 are patentable over cited prior art.

II. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration of claims 1-4 and prompt allowance of claims 1-6 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



James A. Oliff
Registration No. 27,075

Joshua C. Liu
Registration No. 55,391

JAO:JCL

Date: June 1, 2007

OLIFF & BERRIDGE, PLC
P.O. Box 19928
Alexandria, Virginia 22320
Telephone: (703) 836-6400

<p>DEPOSIT ACCOUNT USE AUTHORIZATION Please grant any extension necessary for entry; Charge any fee due to our Deposit Account No. 15-0461</p>
--